

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	(06-1)	BUREAU	10	1
FED. ROAD DIST. NO.		ILLINOIS		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS**

FAI ROUTE 180 (I-180)  
SECTION (06-1)

BUREAU COUNTY  
C-93-002-08  
BOX CULVERT REPAIR

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES
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6. TEMPORARY SHEET PILE - LONG WING
7. TEMPORARY SHEET PILE - SHORT WING
8. CONCRETE REMOVAL
9. CONCRETE BOX CULVERTS
10. SHEET WATERPROOFING MEMBRANE SYSTEM

STANDARDS

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-01 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 701101-01 OFF-ROAD OPERATIONS MULTILANE, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701106-01 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 4.5 m (15') AWAY
- 701400-02 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701401-04 LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701901 TRAFFIC CONTROL DEVICES

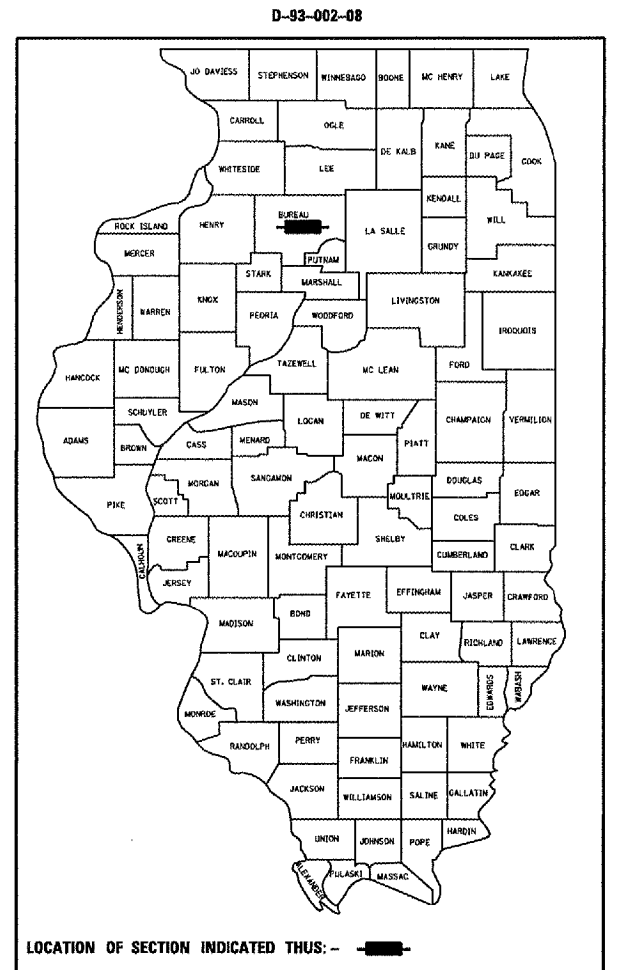
MICROFILMED \_\_\_\_\_  
REEL NUMBER \_\_\_\_\_  
AWARDED \_\_\_\_\_  
RESIDENT ENGINEER \_\_\_\_\_  
AS BUILT CHANGES WERE MADE  
ON THE FOLLOWING SHEETS \_\_\_\_\_

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123

DISTRICT 3 NO. (815) 434-6131

PROJECT ENGINEER: JOE KANNEL  
UNIT CHIEF: RON WOODSHANK  
TOWNSHIP: SELBY

CONTRACT NO. 66733

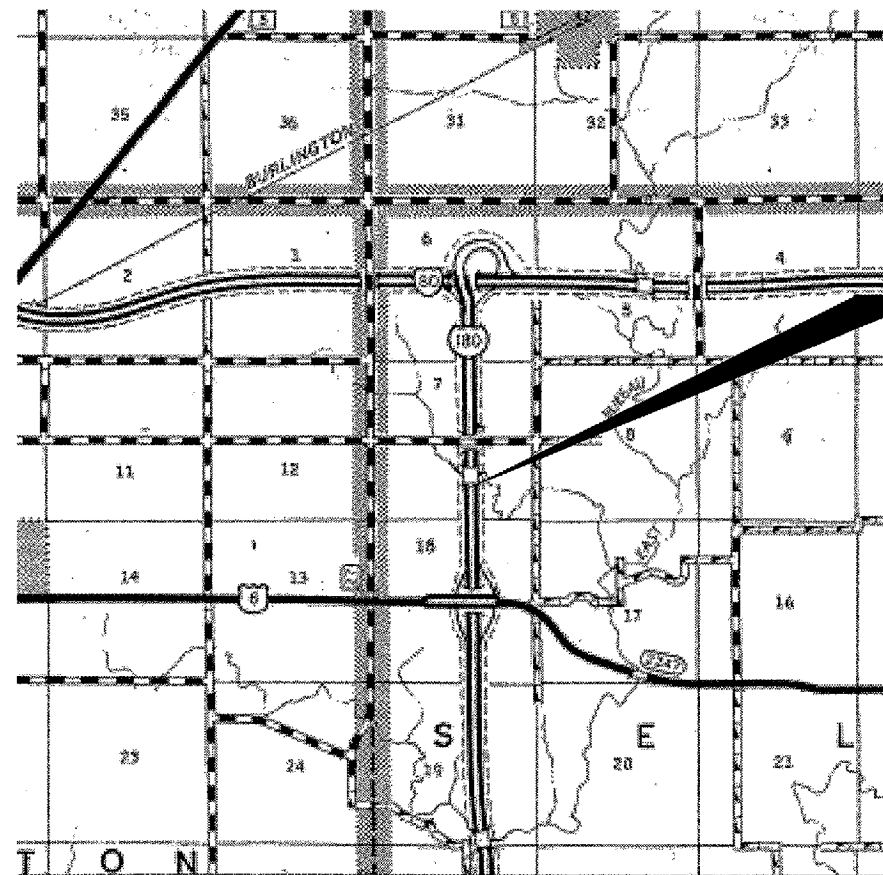


FUNCTIONAL CLASSIFICATION  
RURAL - INTERSTATE  
F.A.I. ROUTE 180 (I-180)  
2005 ADT = 2850  
P.V. = 74.6%    M.U. = 21.0%    S.U. = 4.4%

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 11/1/2007  
*[Signature]*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
Dec 7, 2007  
*[Signature]*  
ENGINEER OF DESIGN AND ENVIRONMENT  
Interim Dec 7, 2007  
*[Signature]*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**



**PROJECT LOCATION**  
S.N. 006-2000  
1.1 MILES SOUTH OF I-80

LOCATION MAP  
NOT TO SCALE  
POINT LOCATION

Date: 10/30/2007  
c:/projects/cmain08/cm316/det ails.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	106-111	BUREAU	10	2
FED. ROAD DIST. NO.	ILLINOIS			

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT BID PRICE FOR THE WORK.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE "JULIE" NUMBER IS 1-800-892-0123. A MINIMUM OF FORTY-EIGHT (48) HOURS ADVANCE NOTICE IS REQUIRED.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

DATE: 10.31.07

PREPARED BY: [Signature]  
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: [Signature]  
DISTRICT CONSTRUCTION ENGINEER

[Signature]  
DISTRICT MATERIALS ENGINEER

[Signature]  
DISTRICT OPERATIONS ENGINEER

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<p><b>GENERAL NOTES</b></p> <p>FAI ROUTE 180 (I-180) SECTION 106-111</p> <p>STA. 157+00</p> <p>BUREAU COUNTY</p> <p>S.M. 006-2000</p>

Date: 10/30/2007  
c:/projects/cm316/details.dgn

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	06-111	BUREAU	10	3
FED. ROAD DIST. NO.	ILLINOIS			

# SUMMARY OF QUANTITIES

CONSTRUCTION CODE TYPE: SFTY-2A

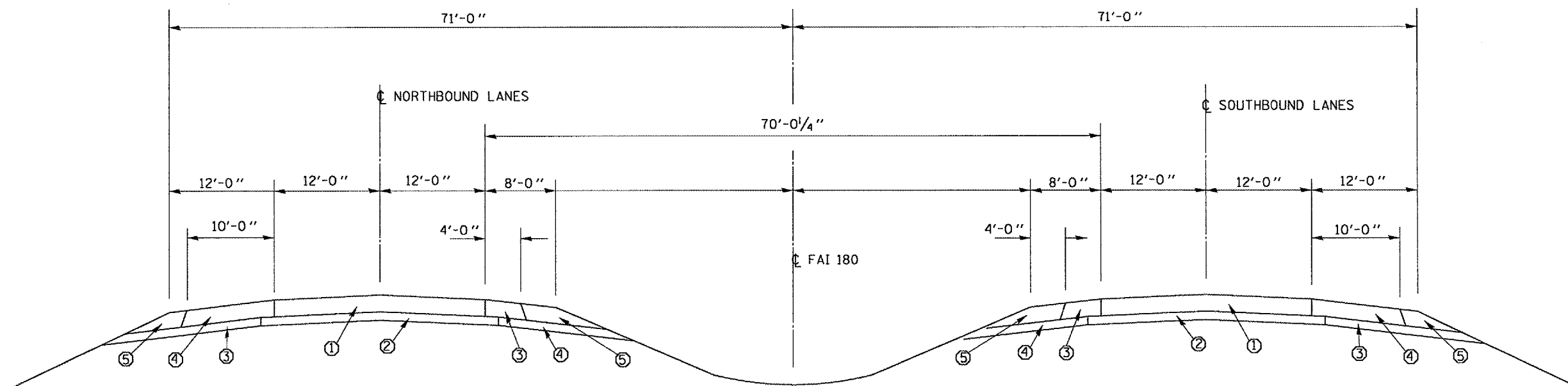
CODE NO.	ITEM	UNIT	RURAL 100% STATE TOTAL QUANTITY
20400800	FURNISHED EXCAVATION	CU YD	50.6
25101005	HEAVY DUTY EXCELSIOR BLANKET	SQ YD	50
50102400	CONCRETE REMOVAL	CU YD	1.9
50200100	STRUCTURE EXCAVATION	CU YD	50.6
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	200
51205200	TEMPORARY SHEET PILING	SQ FT	752
54003000	CONCRETE BOX CULVERTS	CU YD	1.9
67100100	MOBILIZATION	L SUM	1
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1
X0322121	SHEET WATERPROOFING MEMBRANE SYSTEM	SQ YD	27

Date: 10/30/2007  
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SUMMARY OF QUANTITIES**  
 FAI ROUTE 180 (I-180) SECTION 06-111  
 STA. 157+00  
 BUREAU COUNTY  
 S.N. 06-2000

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	06-101	BUREAU	10	4
FED. ROAD DIST. NO.	ILLINOIS			



- LEGEND**
- ① CRC PAVEMENT
  - ② STABILIZED SUB-BASE 4'
  - ③ STABILIZED SHOULDER
  - ④ AGGREGATE SUB-BASE, TYPE C 4"
  - ⑤ EMBANKMENT

- LEGEND**
- ① CRC PAVEMENT
  - ② STABILIZED SUB-BASE 4'
  - ③ STABILIZED SHOULDER
  - ④ AGGREGATE SUB-BASE, TYPE C 4"
  - ⑤ EMBANKMENT

TYPICAL SECTION

Date: 10/30/2007  
c:/projects/cm316/detclis.dgn

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TYPICAL SECTION**  
 FAI ROUTE 180 (I-180) SECTION 06-101  
 STA. 157+00  
 BUREAU COUNTY  
 S.N. 006-2000





F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	(06-1)	BUREAU	10	7
FED. ROAD DIST. NO.			ILLINOIS	



Illinois Department of Transportation  
Division of Highway District #8, Ottawa

**SOIL BORING LOG**

Date 4/8/07

ROUTE FAI 180 (I-180) DESCRIPTION IL 180 over stream LOGGED BY Larry Myers

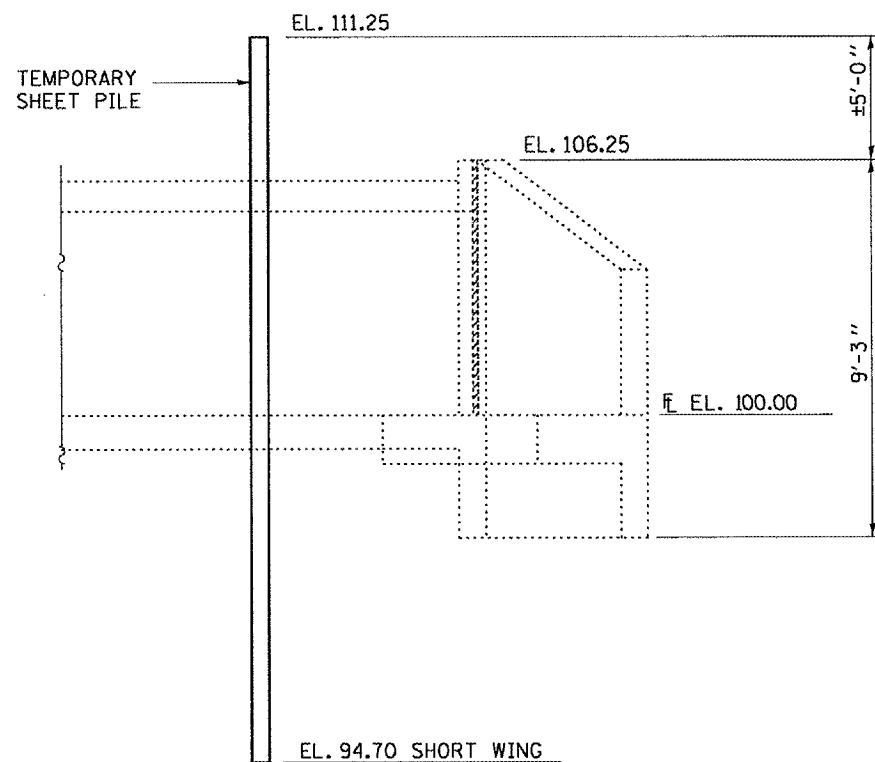
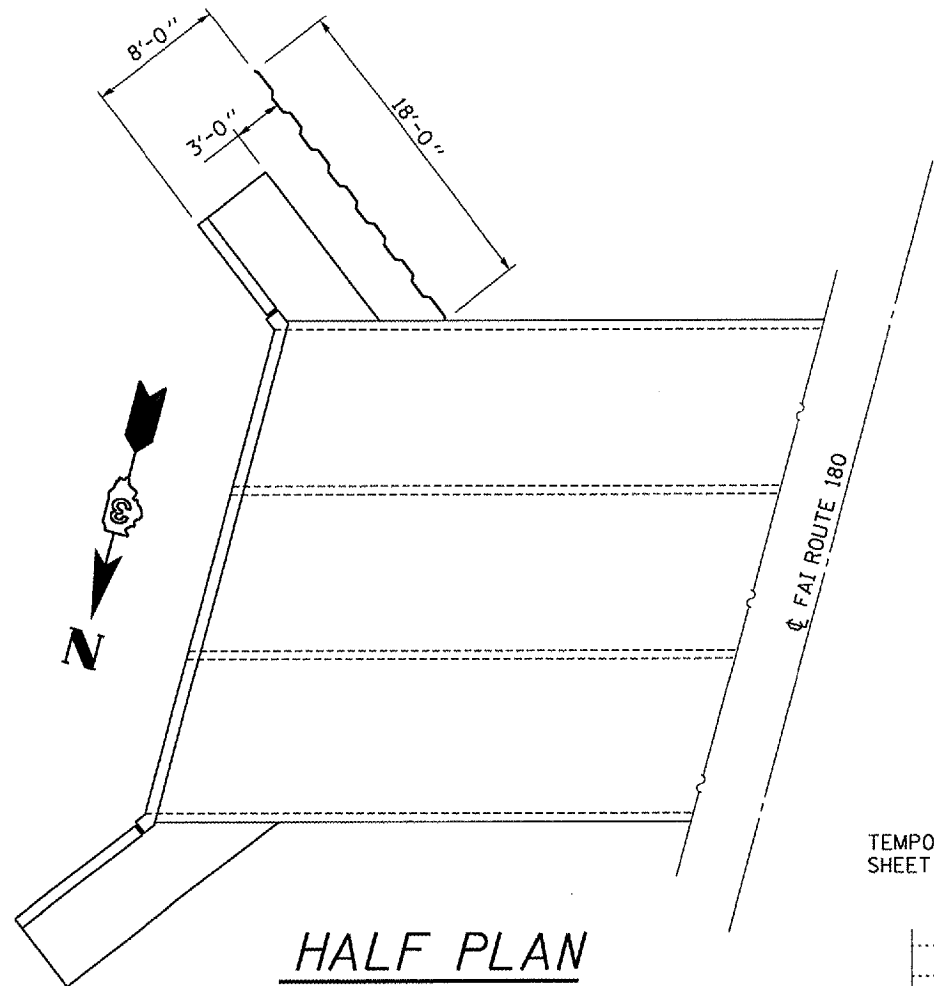
SECTION 06-1 LOCATION SE 1/4, SEC. 7, TWP. 16N, RNG. 10E

COUNTY Bureau DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 006-2000  
Station 157+00  
BORING NO. 2 SE Quad  
Station 157+24  
Offset 49.00ft Lt  
Ground Surface Elev. 89.39 ft

DEPTH (ft)	BLOW COUNT (15')	UNCONSOLIDATED QUANTITY (tsf)	MOISTURE (%)	DESCRIPTION	DEPTH (ft)	BLOW COUNT (15')	UNCONSOLIDATED QUANTITY (tsf)	MOISTURE (%)
0				Surface Water Elev. 89.39 ft	0			
				Stream Bed Elev. _____ ft				
				Groundwater Elev.: First Encounter 73.9 ft				
				Upon Completion 68.4 ft				
				After _____ Hrs.				
0				Augered, black, Silty Clay Loam- fill	17	25	>11.5	10.4
				Loam Till				
87.39				* 19.5-21' sample interval- Max Rimac at 5% compression (continued)				
	4	2.0	24.1	Stiff, black, Silty Clay/Silty Clay Loam- fill with Gravel pieces and organics				
	5	P		Hard, brown, Silty Clay Loam Till				
85.39				* Elevation of CL of NBL set at 100'				
	4			Very stiff, brown and gray Silty Clay Loam Till- fill	25	8		
	5	2.5	17.3		10	6.2	11.8	
	6	P			15	S		
82.39				Stiff, black, Silty Clay				
	4	2.0	26.5					
	4	P						
79.89				Very stiff, brown gray, Silty Clay Loam Till with layers of Sand and Gravel at 15.5'	30	8		
	4	3.0	15.0	Free Water at 15.5'	10	6.2	12.9	
	5	P			12	S		
	2							
	4	2.7	13.7					
	6	B						
	2							
	4	2.5	15.6		35	10		
	12	B			10	6.4	13.2	
72.89				End of Boring	14	S		
	10			Hard, brownish gray, Silty Clay Loam Till				
	12	5.2	10.8	* 19.5-21' sample interval- Max Rimac at 5% compression				
	16	S						
	12				40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) BBS, from 137 (Rev. 8-99)



REQUIRED SECTION MODULUS = 2.2 IN /FT SHORT WING

ELEVATION

BILL OF MATERIAL  
SHORT WING

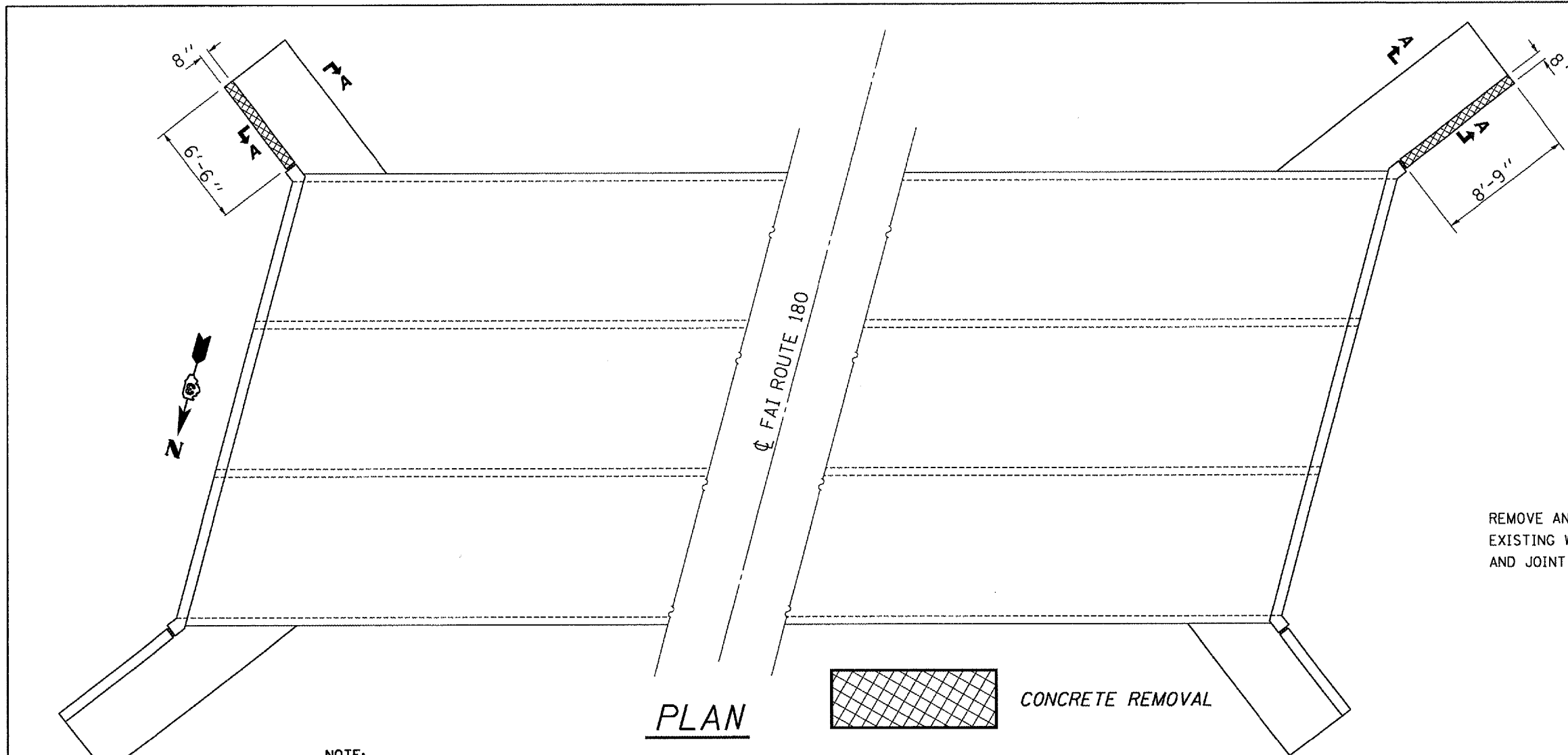
TEMPORARY SHEET PILE	SO. FT.	338
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REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TEMPORARY SHEET PILE**  
FAI ROUTE 180 (I-180) SECTION (06-1)  
STA. 157+00  
BUREAU COUNTY  
S.N. 006-2000

Date: 10/30/2007  
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	(06-1)I	BUREAU	10	8
FED. ROAD DIST. NO.		ILLINOIS		

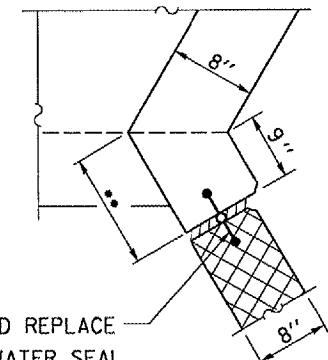


**PLAN**



CONCRETE REMOVAL

**NOTE:**  
EXISTING VERTICAL REINFORCEMENT SHALL BE CUT OFF FLUSH WITH EXISTING CONCRETE FOOTING.



9 1/8" LONG WING  
11 3/8" SHORT WING

REMOVE AND REPLACE EXISTING WATER SEAL AND JOINT FILLER

**CORNER DETAIL**

**BILL OF MATERIAL**

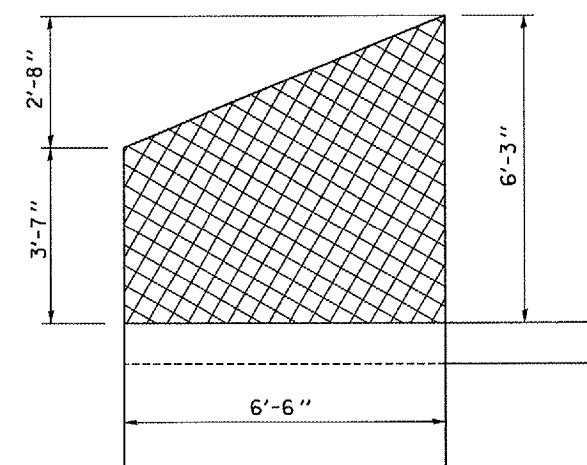
**LONG WING**

CONCRETE REMOVAL	CU. YD.	1.1
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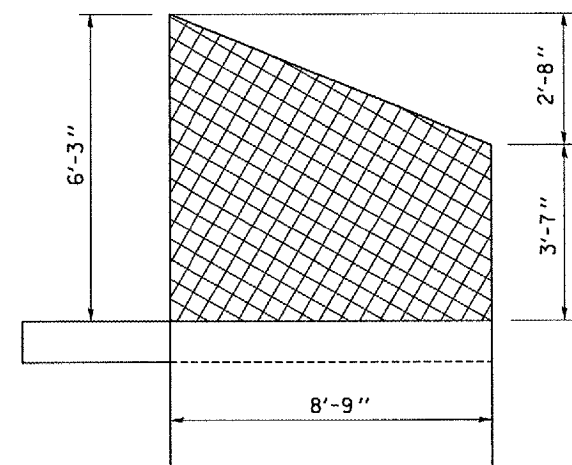
**BILL OF MATERIAL**

**SHORT WING**

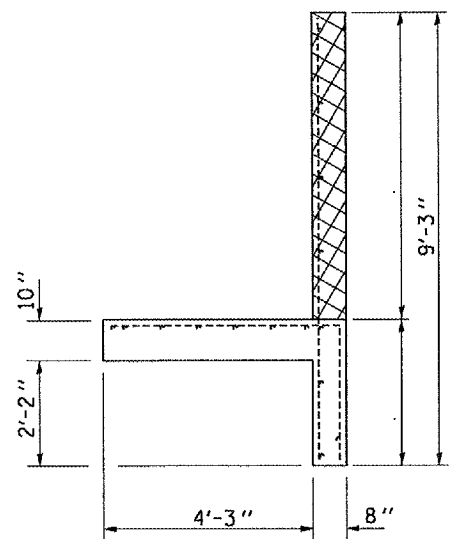
CONCRETE REMOVAL	CU. YD.	0.8
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**SHORT WING**



**LONG WING**



**SECTION A-A**

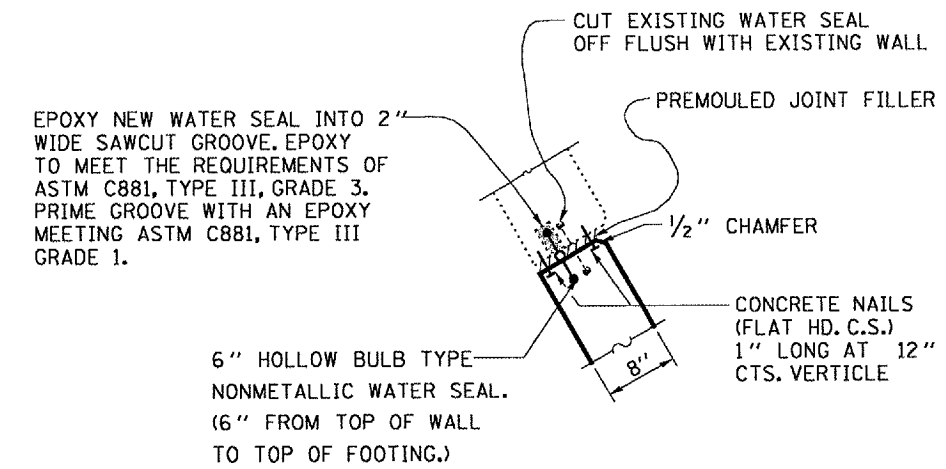
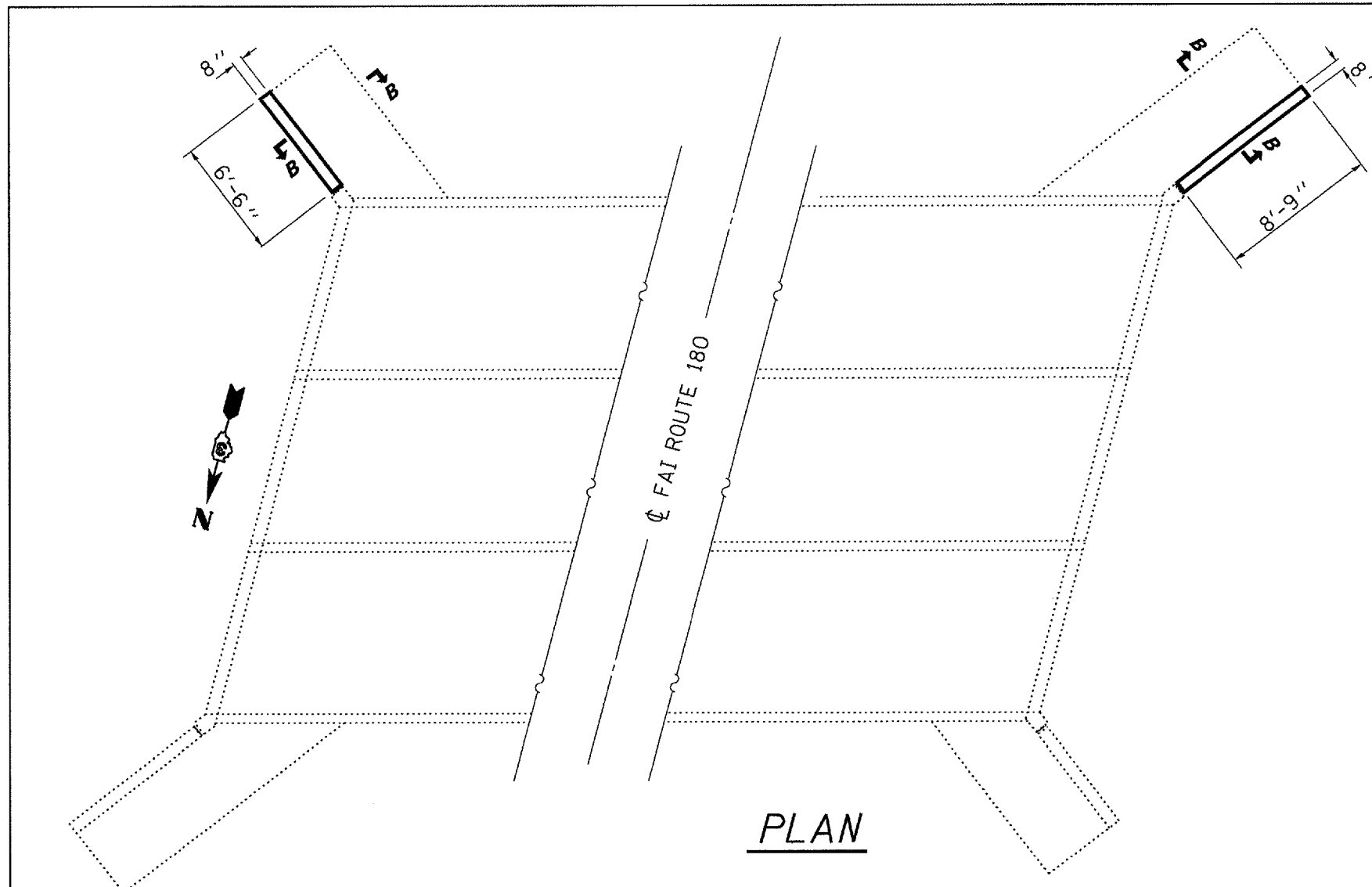
Date: 10/30/2007  
c:\projects\cmaln08\cm316\details.dgn

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE REMOVAL**  
FAI ROUTE 180 (I-180) SECTION (06-1)I  
STA. 157+00  
BUREAU COUNTY  
S.M. 006-2000



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	(06-1)I	BUREAU	10	9
FED. ROAD DIST. NO.		ILLINOIS		



**CORNER DETAIL**

COST INCLUDED WITH "CONCRETE BOX CULVERTS"

**BILL OF MATERIAL  
SHORT WING**

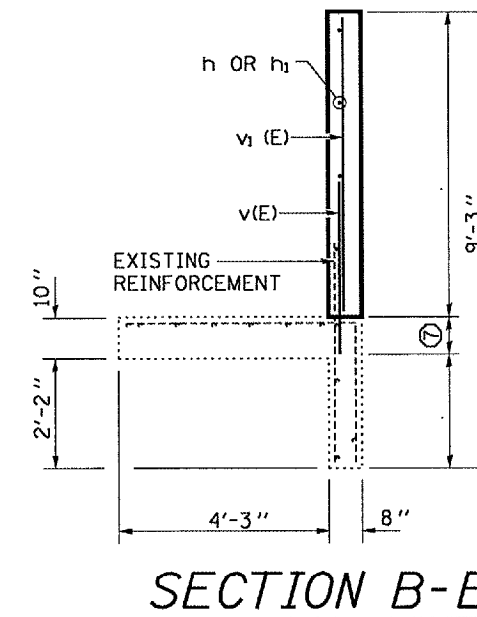
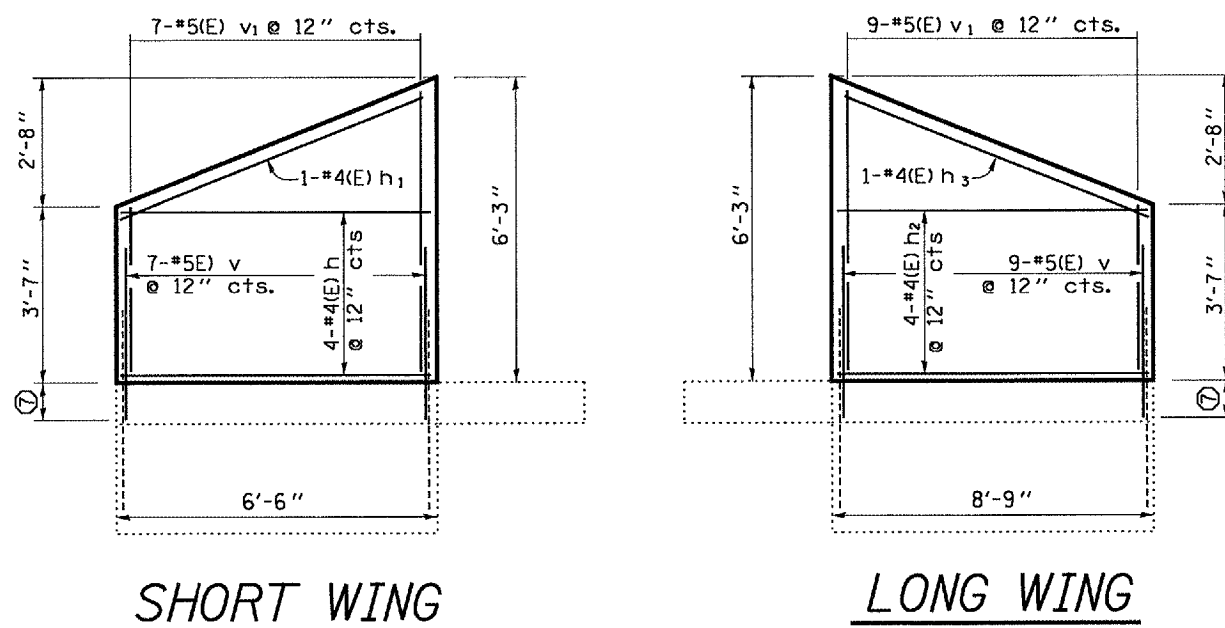
Bar	No.	Size	Length	Shape
h	4	#4 (E)	6'-3"	—
h <sub>1</sub>	1	#4 (E)	6'-9"	—
v	7	#5 (E)	2'-9"	—
v <sub>1</sub>	7	#5 (E)	6'-0"	—
CONCRETE REMOVAL			Cu. Yd.	0.8
CONCRETE BOX CULVERTS			Cu. Yd.	0.8
REINFORCEMENT BARS EPOXY COATED			Pound	90

**BILL OF MATERIAL  
LONG WING**

Bar	No.	Size	Length	Shape
h <sub>2</sub>	4	#4 (E)	8'-6"	—
h <sub>3</sub>	1	#4 (E)	8'-10"	—
v	9	#5 (E)	2'-9"	—
v <sub>1</sub>	9	#5 (E)	6'-0"	—
CONCRETE REMOVAL			Cu. Yd.	1.1
CONCRETE BOX CULVERTS			Cu. Yd.	1.1
REINFORCEMENT BARS EPOXY COATED			Pound	110

(E) DENOTES EPOXY COATED

⑦ DRILL AND EPOXY GROUT v(E) BAR A MINIMUM OF 9" INTO EXISTING FOOTING

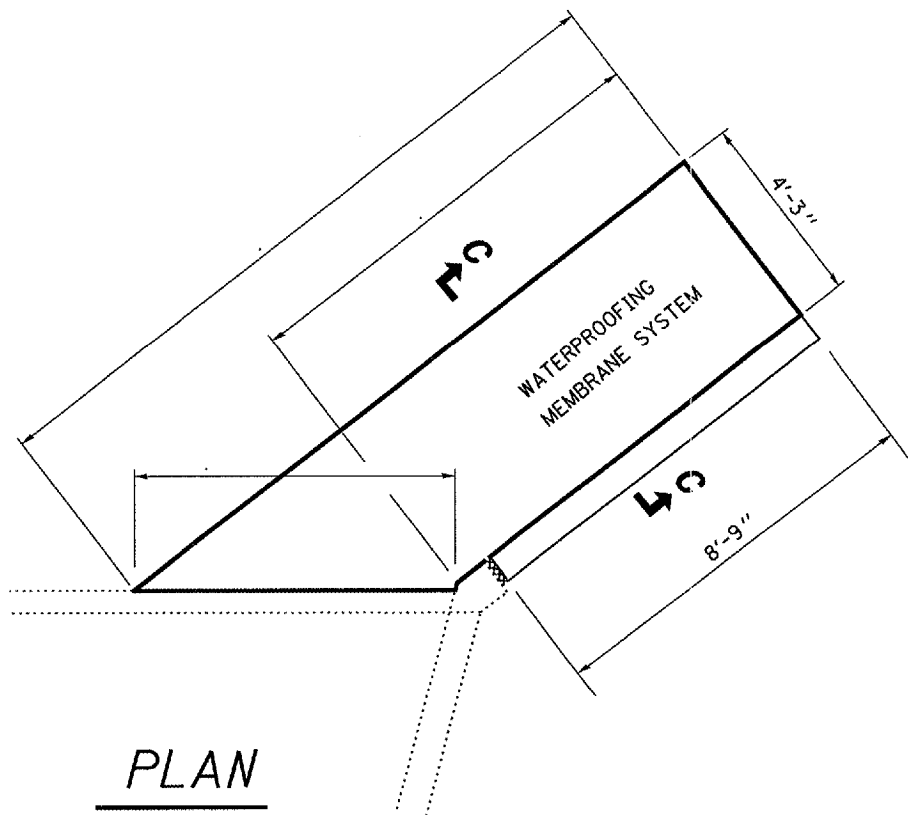


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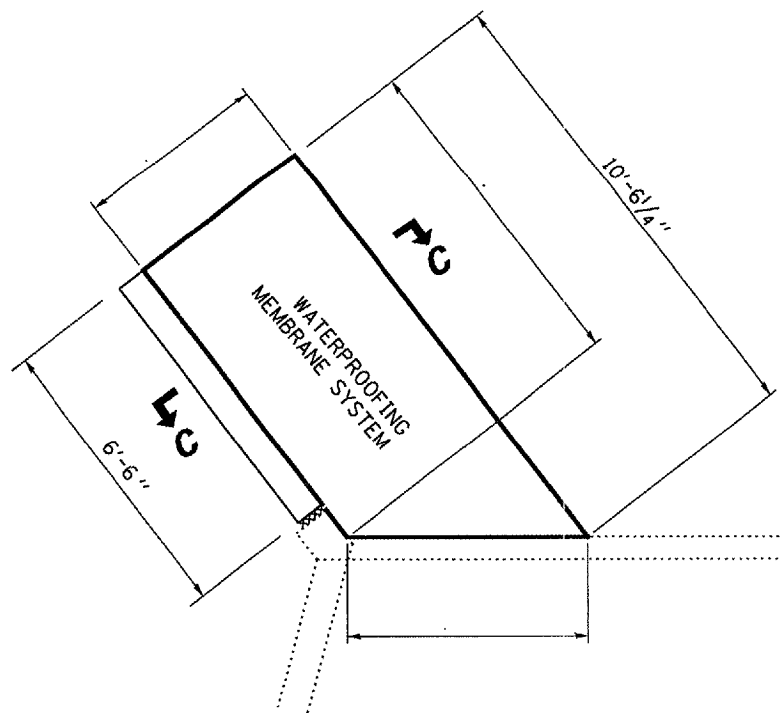
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE BOX CULVERTS**  
FAI ROUTE 180 (I-180) SECTION (06-1)I  
STA. 157+00  
BUREAU COUNTY  
S.N. 006-2000

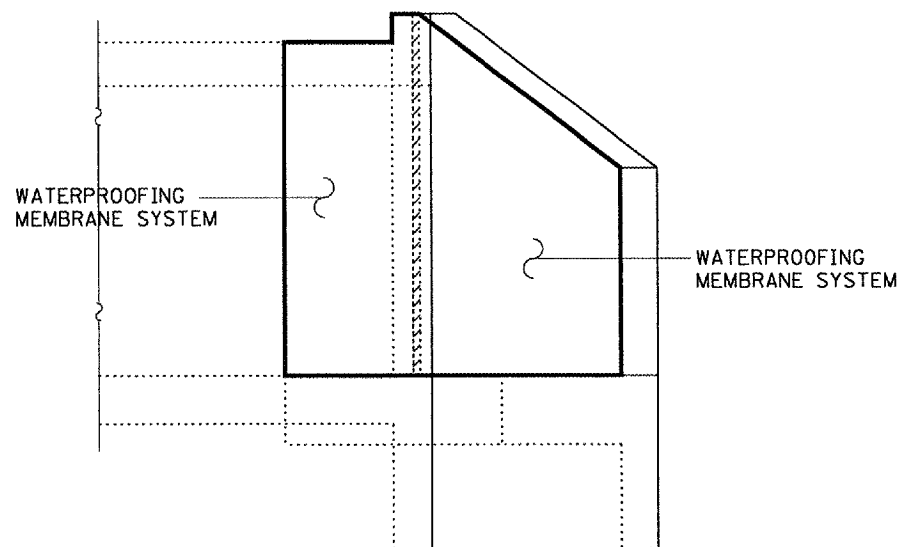
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
180	(06-1)I	BUREAU	10	10
FED. ROAD DIST. NO.	ILLINOIS			



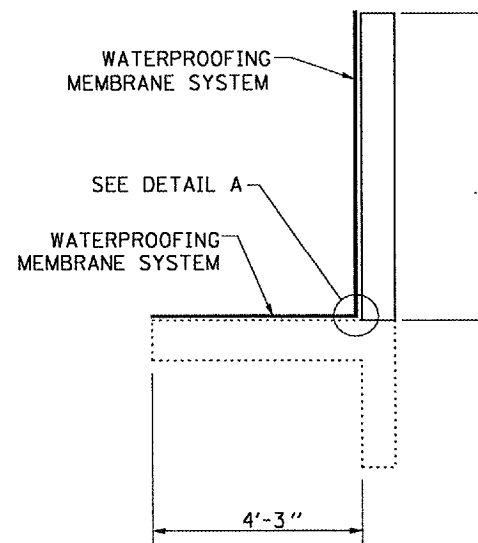
PLAN  
LONG WING



PLAN  
SHORT WING

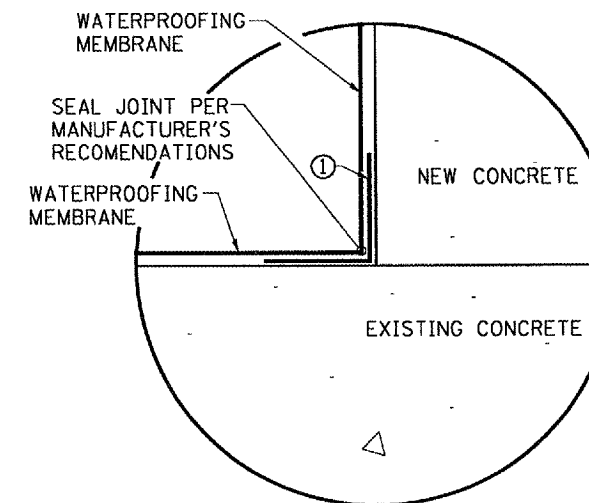


ELEVATION  
TYPICAL



SECTION C-C

① A TWO FOOT (2') MIN WIDTH STRIP OF WATERPROOFING MEMBRANE SHALL BE PLACED CENTERED OVER THE CONSTRUCTION JOINT PRIOR TO APPLYING A FULL PROTECTIVE LAYER TO THE CONCRETE SURFACES.



DETAIL A

BILL OF MATERIAL  
LONG WING

SHEET WATERPROOFING MEMBRANE SYSTEM	SO. YD.	16
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BILL OF MATERIAL  
SHORT WING

SHEET WATERPROOFING MEMBRANE SYSTEM	SO. YD.	11
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NOTES:

THE EXPOSED SURFACES AS INDICATED SHALL BE PROTECTED BY THE WATERPROOFING MEMBRANE AS PER THE MANUFACTURER'S RECOMENDATIONS.

A MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING THE INSTALLATION OF THE WATERPROOFING MEMBRANE TO PROVIDE TECHNICAL SUPPORT WHEN REQUIRED. ALL COST INCURRED DUE TO THE ON-SITE REPRESENTATIVE SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT COST OF THE WATERPROOFING MEMBRANE WORK.

THE CONTRACTOR SHALL INSTALL THE WATERPROOFING MEMBRANE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, PLAN DETAILS AND AS DIRECTED BY THE ENGINEER.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SHEET WATERPROOFING MEMBRANE SYSTEM**  
FAI ROUTE 180 (I-180) SECTION (06-1)I  
STA. 157+00  
BUREAU COUNTY  
S.N. 006-2000

Dcte: 10/30/2007  
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